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# DOLLARS IN NUTS



Texas

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# DOLLARS IN NUTS

*A Symposium*  
*of Nut Culture in the*  
*Southwest*



ISSUED BY

**TEXAS NURSERY  
COMPANY**

**SHERMAN · TEXAS**



## Introduction



THE increased and almost universal interest manifested now in Nut Culture, especially in Pecans, we feel calls for especial attention to, and information upon, Nut Culture. In this little volume entitled "Dollars in Nuts" we have endeavored to set forth in a concise form such information as will be helpful; and hereby dedicate it to our friends, the Lovers of Nuts and Nut Trees.

The brevity of the work necessitated the omission of many details and points of interest which we gladly would have included. The subject is a very large one. Nut orcharding on a large scale, both by planting young trees and by top-working native trees, throughout the South and West, as well as upon the Pacific Coast and in Mexico, is developing fast. If in this effort we succeed in promoting a greater and more intelligent interest in Nut Culture, Nut Production and Nut Consumption, and the planting of two nuts or two nut trees where only one, or where none grew before, we shall have been well repaid for the effort and the expense of this work.

Texas Nursery Company

## Acknowledgement



OUR thirty-six years of untiring effort, and unswerving devotion to the Horticulture of the Southwest, has been rewarded by many pleasures in this chosen life-work, and by many evidences of successful labor. No reward we feel is quite so satisfying and appreciative as the approval accorded us by our friends and customers.

**It shall be our continued purpose** in the future, as in the past, to serve our patrons with the finest and best things in our power to produce, in return for their confidence and their valuable patronage and support.

**In writing "Dollars in Nuts,"** we are pleased to acknowledge indebtedness for valuable suggestions to many good authorities whom we have endeavored to accredit properly. We especially mention Professor W. N. Hutt, Geo. C. Roeding, Prof. E. J. Kyle, "The Nut Grower," Mr. E. W. Kirkpatrick, Bulletin No. 2 of Texas Department of Agriculture, and others.

### *Our Facilities*

**Our main office** and packing-grounds are located in Sherman, Texas, at the south end of Walnut street. To reach our establishment, on arrival at Sherman, take a South Travis car to the end of the line, then walk one block east and two south. Visitors are cordially invited.

**Our packing-houses** contain more than 18,000 square feet of space, and are virtually frostproof. Abundance of water is piped to all parts of our packing-houses and grounds, giving the best facilities for handling stock during all conditions of weather, with the least exposure.

**We choose soils** specially adapted to each class or kind of trees and plants. These soils receive careful preparation. In them we plant the highest grade of seed, scions and grafts,

and, with careful cultivation, we are able to grow and train stock into the most desirable grades.

**Our Digging** is done with the latest improved tree-diggers. We use the best material in packing, labeling and handling.

**Shipping** begins about November 1st, and continues until the following April.

**Telegrams** are transmitted promptly to or from our office by telephone.

**Our railroads** are Houston & Texas Central, Texas & Pacific, Missouri, Kansas & Texas, Santa Fé, St. Louis & Southwestern, St. Louis & San Francisco, and Electric Interurbans.

**Our express companies** are American, Pacific, Wells-Fargo & Company, United States and Interurban.

**Our telegraphs**, Western Union and Postal. Long-distance 'phone connections in our office, both Independent and Southwestern.

**Skilful assistants**, trained for the various departments of work in the fields, greenhouses, grafting cellars, packing sheds and offices, are employed, and all are equipped with the latest improved appliances best suited to their respective duties.

**Please address all communications** pertaining to business to Texas Nursery Company rather than to any member of the firm.

## DOLLARS IN NUTS

### *The Volume of Nut Production in the United States*



**THE** Production of and the trade in nuts of the United States is colossal in proportions.

**The leading nuts of commerce** are, stated as to the relative amounts produced, Walnuts, Almonds, Pecans, Hickory Nuts, Peanuts, Chestnuts, Cocanuts, Hazelnuts, Filberts and Chinquapins.

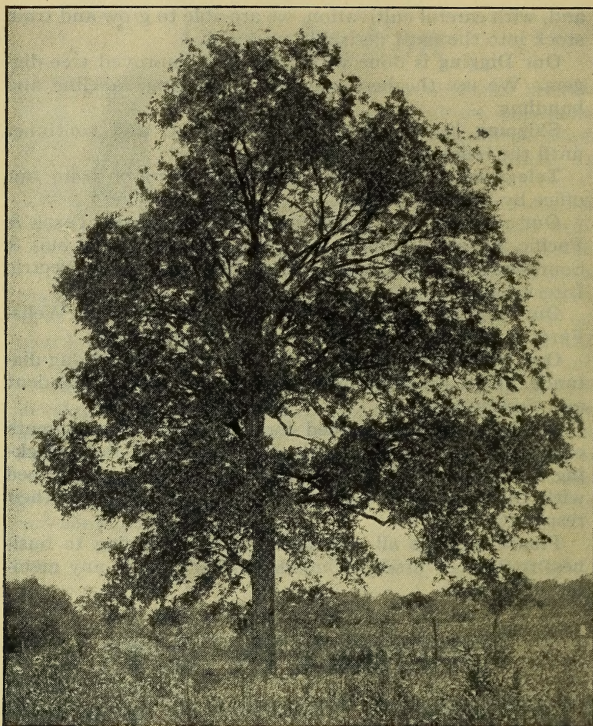
**The Annual Production** of English Walnuts is perhaps over sixteen million pounds, and 99% of these are grown in California.

**Of almonds** there are produced in the United States about eight million pounds annually, 97% of which are grown in California. Practically all of these are consumed in the United States and, besides, there are nine or ten million pounds imported annually from foreign countries, largely from Western Asia and Northwestern Africa. Over three million dollars' worth of nuts are imported annually into the United States, while our exports are only about sixty-five thousand dollars. The above estimates are based largely on the census report of 1900. The forthcoming census of 1910 may show many changes. (See other notes forward upon Walnuts, Almonds, etc.)

### *Nuts as a Food Product*

**Nuts against meats** is a subject of vital importance. Each year witnesses the decrease of the use of animal fats and all kinds of meats, and a corresponding increase in the consumption of nuts. This movement is being stressed largely owing to the increased prices of meats, as well as by the adverse stories of packing-house abuses. Besides, the nut is the ideal carbonaceous food: it is richer, more wholesome and more vitalizing than the best beefsteak. Experts accredit nuts with 15% to 35% of protein and 50% to 70% of fat, with the nutritive elements better balanced than in meats and, properly eaten, are as easily digested.





**NATIVE TREE ADJOINING OUR GROUNDS**

**Three feet diameter of trunk, 75 feet high, 60 feet spread.  
Probably 100 years old, bearing bushels of nuts**

**COLLOQUY**

"Tell us, Father Pecan Tree, of the early days."

"Those were great days, a hundred years ago, when 'The Great Spirit' watched over the Caddos, the Tejahs (or Texas) of the timber braves, the Lippan, the Mescalero, the Comanche and the Apaches, of the Plains group, and the Coast Indians of the South, before the days of the White Man. They smoked the pipe of peace here under my branches, and drank water yonder at the spring, and enjoyed fully all these happy hunting grounds.

"Then came La Salle from France, then La Fitte upon the seas, Santa Anna from Mexico, Austin, Crockett, Houston, Milam, Deaf Smith and Bowie from 'the States' and we wept for sorrow over Goliad, The Alamo and San Jacinto. Grayson and Fannin lodged here later, and we shared our bread [nuts] with them. The 'Great Overland Stage' swept grandly by, and things went well, along in the forties and fifties, except now and then a raid by Geronimo and Big Heart, many a valiant Ranger and Cow Boy losing their scalps.

"In the sixties, the young men and maidens here, under the shadows, plighted their mutual love, loyalty and allegiance to each other, and to the 'Southern Cause' and the fathers and mothers offered their sons 'on the altar of Southern Liberty'—too many of them never to return.

"The Overland Stage now disappeared, before the shrill whistle of 'The Iron Horse'. The Cow Boy drove his herds westward, the 'Man with the Hoe,' the Electric Interurban and the buzzing auto have come, and go scurrying about until one is dizzy to keep up with the 'march of progress' so called.

"And they say these nuts of mine, the pride of all the world for a hundred years, are small and hard; that our sons must be decapitated and regenerated to grow 'The Improved Nuts.' What are we to come to next?—the Great Spirit deliver us."



## THE PECAN (*Hickoria Pecan*)

There are ten or more species of the Hickory, the Pecan being the most important from a horticultural standpoint. Its desirable qualities of rapid growth, great productiveness of nuts, with thin shell, good cracking and separating qualities, full kernel and delicious flavor, easily place it in the first rank in domestic and commercial importance among our native, as well as cultivated nuts here in the Southwest.

The Pecan Industry has been neglected so far as securing accurate and reliable data by the census authorities. It may be for want of coöperation by growers and dealers. There is room for great improvement in the 1910 report. This resource is worthy a careful and full report. The estimates of Pecan growing made up from dealers, as well as census reports, run all the way from three and a half million to twenty million pounds, or from two hundred to nine hundred carloads. It is probable, if all sources of production were considered, those gathered for home consumption, as well as market, the amount would reach the latter estimate, thus placing the Pecan at the head of the list of nuts. Texas produces 56% of the Pecans of the world. At the low valuation of 6 cents per pound, the Pecan crop is worth annually \$1,200,000.00.

### *[The New Era in Pecan Growing]*

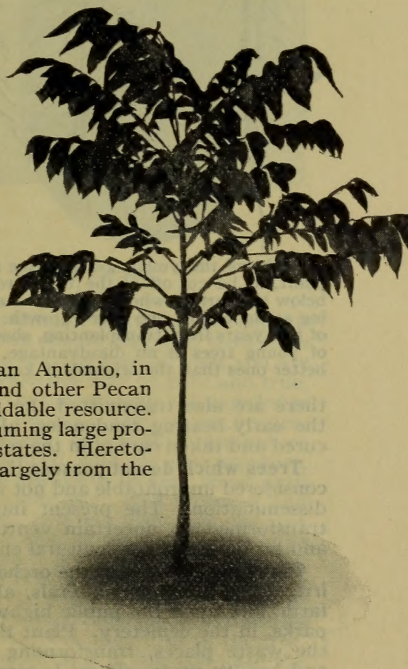
Walnut and Almond growing are largely confined to California at this time, not so with the Pecan.

The Pecan is indigenous and reaches its highest perfection throughout the Cotton Belt section, especially in the Mississippi Valley and tributaries, and the Brazos, Colorado, Nueces, Rio Grande and Pecos.

By states, Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, and more or less in North and South Carolina, Kentucky, Arkansas, Tennessee, Oklahoma, New and old Mexico, Arizona and California, and have been found as far north as parts of Missouri, Kansas, Illinois, Iowa and Indiana.

Texas is said to produce more Pecans than all other sections combined. Many old trees along our streams, 140 feet high and six feet in diameter, are producing enormous crops of nuts. There are native groves containing thousands of trees. Many people make their living by gathering native Pecans. The car lot and wholesale trade in nuts in San Antonio, in Brownwood, San Angelo and other Pecan centers, constitute a formidable resource.

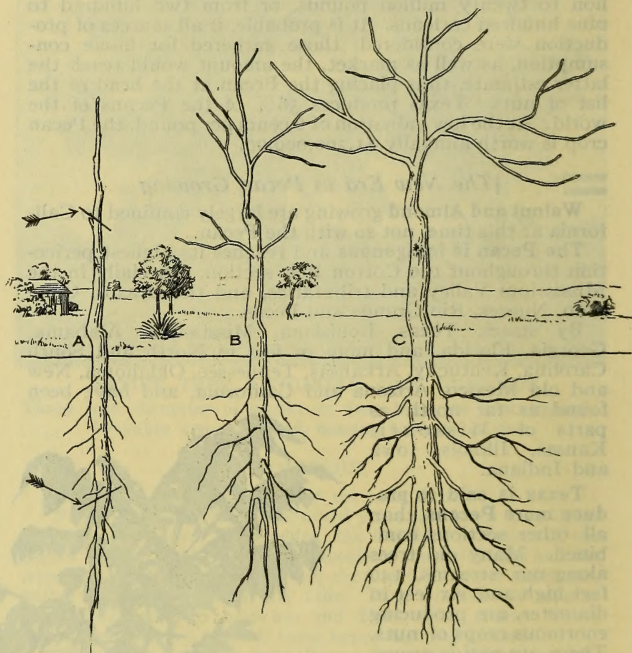
Pecan orcharding is assuming large proportions in the southern states. Heretofore the output has been largely from the native trees, or from seedling orchards, usually of nuts small to medium in size, with a share of large, thin-shell fancy nuts, ranging in price from five to fifteen cents a pound for the former and thirty cents to one dollar for the latter. Up to this time



Typical Grafted Pecan Tree, 2 years old

the heavier plantings of improved Pecan orchards have been more largely in Florida, Georgia, southern Alabama, Mississippi, Louisiana and Texas, also in old Mexico. The business is yet in its infancy, though rapidly developing. When these thousands of acres which have recently been, and are still being planted mature into bearing orchards, and the thorough organization now effected by the National and State Nut Growers' Associations, fully materialize so as to get full reports, it will doubtless appear that Pecan growing is easily the foremost nut interest in the world.

**Grafted and budded trees** should be planted. Life is too short and land and labor too valuable to plant and wait for and take chances on seedlings. The grafted trees can be relied on, if given favorable conditions and treatment, to reproduce the fine nuts of the parent tree. Besides the fine size, appearance and quality of the nuts,



A shows the young grafted tree at one or two years ready to plant, to be cut off at the two arrows  $1\frac{1}{2}$  to 2 feet above and below the surface when planted. B shows the new tap-roots forming at the end of one year's growth. C shows the tree at the end of two years from transplanting, showing that to cut the tap-root of young trees is no disadvantage, because they form new and better ones than the originals if kept intact.

there are also transmitted the vigor, productiveness and the early-bearing tendencies, all of which have been secured and taken care of in the selected parent trees.

**Trees which do not possess** the above characteristics are considered unprofitable and not worthy of propagation and dissemination. The present improved Pecan trees have transformed an uncertain venture into the most certain and profitable of horticultural enterprises.

**Plant Pecan trees** in the orchard, in the yard, along the irrigating canals and laterals, along the roadways in the farm, and upon the public highways, on the street, in the parks, in the cemetery. Plant them along the streams, in the waste places, transforming them into profit-bearing and beauty spots. There is scarcely a place where a fine Pecan tree would not prove an ornament and a blessing.



Plant grafted trees, producing fine nuts as well as beauty. If not these, plant seedlings for the shade and beauty, as well as for the nuts. That truism is thrice applicable to the Pecan, which runs "There is a mysterious tie that binds us to a tree that will, on through generations yet unborn, and always, bless the heir who inherits."

### *Practical Suggestions*

The soil for Pecan growing should be a good ordinary soil that will grow good crops. Deep alluvium of creek- and river-bottoms is perhaps best, but many of our best-paying Pecan trees are upon good ordinary uplands, both timbered and in prairie sections. Avoid poor, dry, shallow land. The Pecan responds well to good land, with reasonable moisture and fertility.

Many of our Southern river- and creek-bottoms are ideal for Pecan orchards. Not the swampy and water-logged, but those with reasonable drainage, though subjected to temporary overflows. Those bottoms which are reclaimed by leveeing are prime. No investment is better than to plant such to Pecans and grow alfalfa and other crops between.

The preparation of the land should be deep and thorough by plowing and harrowing before planting. Lay out straight furrows, forty feet apart each way, and plant in the crosses, taking care to secure perfect alignment. If deep bottom land, make it fifty feet.



Type of the modern Pecan

The transplanting and handling of the trees are very important. In the first place, you should buy your trees from a reliable source, so that you may be sure of what you are planting, not only that the varieties may be pure and true, and of the best, but also that the nurseryman has knowledge and experience in handling Pecans. They must be provided with a good root-system, be carefully grafted or budded, carefully dug and handled, with the least exposure, and so packed in shipping as always to be kept moist until planted again. The land having been well prepared and checked off, dig a hole about two feet deep and one foot or more in diameter, trim the ends of the roots and set the tree 4 to 5 inches deeper than it grew, put in fine rich soil until the hole is two-thirds full, water freely, fill up the hole, press slightly and cut the tops back to from two to two and a half feet above ground. Some good authorities recommend boring a hole with post augur, set in the tree, fill the hole with water, then sprinkle in fine soil until the hole is full, thus encasing the tree roots completely with the settling, fine earth.

**Care and Culture.** The Pecan will stand a great deal of abuse and still make some headway; but it appreciates and responds readily to good treatment. Its growth is slow at first while establishing its root-system, then it grows off quite rapidly. Cultivate the young trees well by plowing a strip six or eight feet wide for three years or longer, planting no crop nearer than four to six feet of the trees. Plant no grain, but cotton, potatoes, peas or alfalfa between the rows. Orchard trees and blackberries might be planted, to be taken out later, or Pecan trees may be planted in the young fruit orchard, taking care not to crowd.

**Pruning the tree** should be such as to form a low, spreading head, the branches to start out four to five feet from the ground. Cut back a part of the new growth, not over half of it, for two or three years, only cutting out afterwards unhealthy and interfering or stray branches.

**The age at which a Pecan orchard will bear** depends much on the kind of trees planted, the soil and the treatment. Our grafted and budded trees are from trees that have the habit of bearing young, hence come into bearing, as a rule, much earlier than the seedling trees. Some young trees on our grounds produce some nuts at three to five years after grafting, and we may expect good results in six or eight years, on trees properly cared for. But think of it—at fifteen years your trees are very profitable; at twenty-five or even fifty years, and on, you may expect them to increase in profitability with a minimum expense of care.

**Gathering and marketing** is free from the bustle, hurry and often sacrifice of the more perishable fruits. "Nutting time" may be conducted in a seasonable, businesslike, methodical, yet prompt way. The surface of the ground under the trees should be made reasonably clean and smooth before harvest time, so that the falling nuts may be readily picked up. So far, the old method of jarring and mutilating the trees and picking up the nuts by cheap labor is largely in vogue. In due time, however, better devices will prevail, such as clubs or mallets and "rams" padded to prevent bruising of the limbs and trunks in jarring, and canvas receptacles for catching and concentrating the nuts. The old plan of four to six men swinging a heavy "log ram" against fine trees, terribly mutilating the bark, and even felling large, valuable trees, with the axe, to get the crops, should be prohibited by law as a criminal abuse.

**The nuts should be graded**, either by hand selection as gathered, or by a grading-machine. The former is preferable, because quality as well as size must be considered in grading. After grading, the several bags should be labeled, designating the grade of each, such as "Fancy" or "Prime," "No. 1," "No. 2," "No. 3," "No. 4" and "No. 5."

**Score-cards in judging Pecans** are necessary, and are liable to change. The following is largely adopted now, allowing a total of one hundred points:

|                                  |    |
|----------------------------------|----|
| Thinness of shell .....          | 10 |
| Separation.....                  | 20 |
| Size .....                       | 15 |
| Form .....                       | 5  |
| Color of nut .....               | 5  |
| Plumpness of meat .....          | 20 |
| Quality and flavor of meat ..... | 20 |
| Color of meat.....               | 5  |
| <hr/>                            |    |
| 100                              |    |

Sixty per cent of meat in weight and high quality and flavor should be sought, and these are more largely found in nuts of medium size, rather than those of extra-large size.

**Finally**, don't be in a hurry to market your Pecans. They will keep, and are as good as "Wheat in the Mill." You can hold until the market gets good and ripe.



### *Where to Plant Pecan Orchards*

**Nature is a very wise, very conservative and very beneficent teacher.** However, Nature must be supplemented by her co-workers—man, the birds, the animals, the winds and the floods, in the distribution of her plantings. Where Nature leads the way and plants and grows Pecan trees, we can usually safely follow. Ofttimes we may carry this planting to points having similar conditions, where Nature has not been assisted by having seeds deposited by her co-workers, hence as yet there has been no development.

**The finest natural Pecan orchards** in the world are in Texas. From the Rio Grande and Pecos on the west to the Sabine and Lower Red River on the east, and from the Upper Red River on the north to the Great Gulf on the South, are the great plantings made by Nature, and which, up to last reports, furnished fifty-six per cent of all the Pecan nuts marketed in the world, besides many carloads gathered of which no reports have been made.

**East of this along the great Mississippi** with its great tributaries, covering the most wonderful agricultural basin in the world, the Pecan tree flourishes more or less by nature and is even found as far up as the Wabash Valley in Indiana and the lower Ohio Valley. There are said to be no native Pecans east of the state of Mississippi.

**Influence of environment** is very pronounced in the development of the Pecan. The lower, moister sections and the elevated drier sections, owing to widely varying conditions, evolve characteristics so different as to show, as it were, two races of Pecans. The coastwise, more moist regions, produce larger size, thinner shell nuts with a tendency to want of fullness of meat, while the nuts of the elevated, more dry atmosphere may lack in size and to a degree in thinness, yet they make up in fine quality and in high percentage of meat.

**Take the great natural orchards** of the Rio Grande and its tributaries, the Nueces, the Guadalupe, the San Antonio and the Brazos Valleys in southwest Texas and Mexico: There seems to be a peculiar adaptation resulting in sure and prolific cropping and fine quality of nuts, which show a large percentage of meats of good quality and color.

**Professor Harvey C. Stiles**, who is an acknowledged authority, says: "The conclusion is irresistible. I believe the Rio Grande region, on both sides of the border, will one day be more famous for its great Pecan orchards and for its production of these best-of-all nuts, than for any other product."

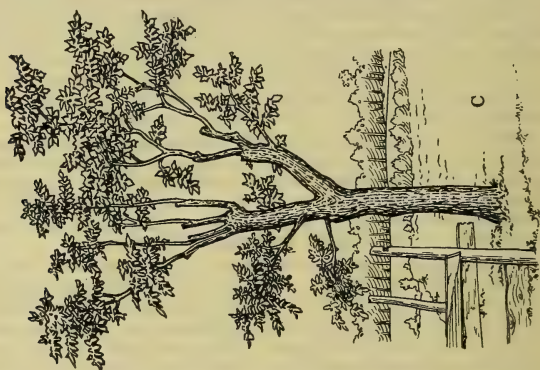
He further says "The Pecan of this section has the wonderful faculty of 'not losing its head' and starting growth and blooming prematurely under the warm ninety-degree rainy seasons we have some winters, but remains asleep until the proper time for sap moving and blooming. Besides this, there are no rains in blooming season to spoil the pollen, as in rainy sections, inasmuch that the Pecans of this section have not missed a crop for twenty years."

There is much of this country well adapted to Pecan growing which has no native trees, owing in part to never having seed deposited and, in part, for want of moisture supplied by artificial means until they start.

**Given moisture and culture**, the soil and climate of most of this great Pecan belt of western and southwestern Texas will make profitable Pecan orchards. The same may be said of the more central and northern sections of Texas, up as far as Roswell, perhaps further, in the Pecos section, to Clarendon in the Panhandle, or even to the northern limits of Oklahoma, eastward to the Atlantic and again southward to the Gulf.

**The largest plantings of the improved Pecans** up to this time are being made in the southeastern states, in Mississippi, Alabama, Georgia, Florida and the Carolinas. Louisiana, Texas and Mexico are fast awaking to improved

Pecan planting. Eastern Texas and the Central Coast offer a fine field; as already stated, the dry southwestern fields in Texas and Mexico offer superior advantages. Pecan orcharding has passed the experimental stage. The phenomenal successes so far attained, the profitableness and permanency of the enterprise, the transformation of large areas of cheap lands into abiding gold-mines, as it were, is attracting the best talent of the land and the investment of large capital, and there probably can be no better investment. The work of planting the improved Pecan is being pushed just as fast as the land and the trees can be secured and made ready. The demand for trees is immense.

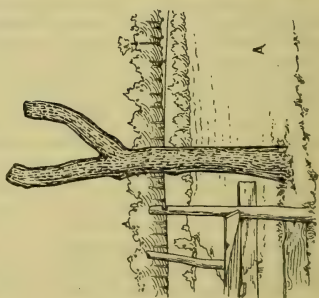


Showing the progressive steps of top-working a Pecan tree.

A. The stump ready to send out new sprouts.

B. New sprouts growing from the stump.

C. The sprouts, having been budded and grown one year.



### *Top-Working Native Pecans and Hickories*

It is entirely practicable to transform worthless native young Pecans and Hickories into trees bearing the finest improved Pecans by budding or grafting in the tops with scions from the improved trees. While very large trees may be so treated, it is far better to handle young trees two to six inches in diameter.



**Saw all the limbs and the main body** of the subject off short, above where they form, just before the buds swell in the Spring, usually about March. This will cause a profusion of sprouts; select and bud in June, July or August, one to ten, owing to the size of the tree, of the choice ones, wrap well with waxed cloth, and remove or subdue those not budded. In twenty or twenty-five days, the buds should adhere sufficiently to cut the tops of the native shoots back to within six inches of the bud, leaving some foliage above the buds to maintain the life of the sprout until the new buds come out, after which the shoots or stocks are to be cut back to the new bud. More or less care is necessary, while not destroying it altogether, yet, to keep the native foliage partially subdued, giving the new buds the better chance. The second year the native growth may all be eliminated, unless it be on very large trees, and let the new buds constitute the entire top. If the buds should fail to grow, the same shoots may be grafted the next February or March. We show on page 13 a large, old pecan tree on our grounds, bearing very small nuts, but which at two years from budding bore very fine nuts of Stuart in the new top, while the lower limbs bore the original small nuts. Mr. E. W. Kirkpatrick, of McKinney, President of Texas Nursery Company, has a wonderful demonstration of top-working both the Pecan and Hickory. Professor Kyle, Horticulturist of A. & M. College of Texas, is making valuable demonstrations in top-working both Pecan and Hickory, and many others are doing the same. The day is not distant when the great wanton destruction of vast natural forests of young Pecan and Hickory, to make room for cheap farm crops, will be stopped, and the trees transformed into the most valuable Pecan orchards. We have been long sleeping on fine opportunities here.

**The requisites** are the native trees, of which there are millions, a saw, a budding-knife or any good, sharp knife may be used, waxed cloth, original improved Pecans growing near at hand from which to cut the buds or grafts, a love for the work and reasonable skill; of course, buds or scions may be bought if not at hand.

**Contracting out to experts** work of large proportions is a proper plan, or the cutting back and other preliminary work may be done by common labor and an expert employed to do the more particular work of budding, grafting and training the first season.

**Budding and grafting** the Pecan may well be studied and practiced as a means of profit as well as of pleasureable interest. The sap must be flowing well in both scion, or bud stick, and in the stock, the tree to be worked upon, which is shown by the bark peeling readily. Some get the more mature buds of two year's growth, others of the present season's growth. We prefer the former. Ring budding is best, see illustration, page 12—"a" is the bud ready to insert, "b" the stock made ready, "c" the work as completed. A waxed strip of cloth is commonly used, yet many use only a clean cotton or other cord. The work must be carefully and dextrously done with as little exposure to the cambium or inner bark as possible. Budding is done during sap flow, in July or August, depending on the season. Grafting is done in Spring, just before sap flow, usually in March or April. Cleft grafting, bark grafting and splice grafting are practiced. The operations of budding or grafting are practiced both upon seedlings in nursery row, one or more years old, and upon older trees which have been prepared for top-working. The part of the illustration marked "d" on page 12 shows both cleft and bark grafting. "2" shows the native tree cut off in March or April at the beginning of sap flow, the bark raised with knife and three scions, cut wedge-shape, all from one side, inserted and tied. This end of the tree is to be waxed over carefully to exclude the air, and the scions to grow out and make the top for the tree. "3" represents a limb cut off the year before and was not budded in July or August, now cleft grafted in

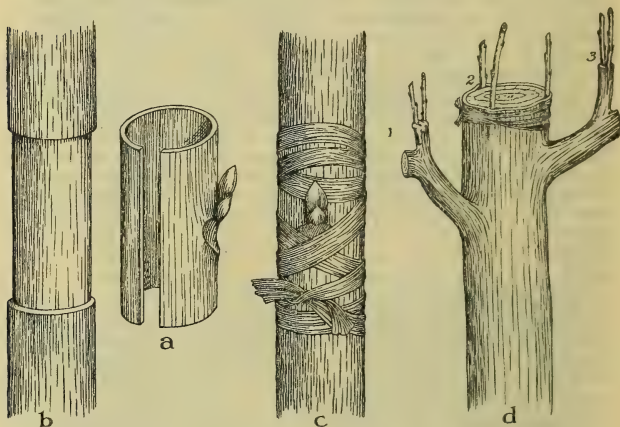
March or April, a year following the time of cutting off the limb, but has not been waxed. At "r" is shown a similar operation, upon another limb, that has been waxed and completed.

**Grafting wax.** Formula No. 1. Resin four parts (by weight), beeswax, two parts, tallow one part.

Formula No. 2. Resin six pounds, beeswax two pounds, linseed oil one pint.

Cut solids into small bits, mix well and boil till thoroughly dissolved and compounded. It is well to "work" the wax thoroughly, as candy is "pulled," to make more pliable. Use linseed oil or tallow on the hands to prevent sticking.

**Waxed cloth.** The melted wax may be applied with a brush to cotton cloth, making same into strips one half inch wide for tying in buds or grafts. Others use carpet chain to tie with, then cover with wax the buds and grafts, while others use no wax on buds, but only on grafts.



a, b, c, the various steps in the process of ring budding; d, cleft and bark grafting

### *The Art of It*

**Do not be misled** by the statement of experts that Pecan propagation is easy. To the expert it may appear simple, since his observation, close study and practice have shown him the nice points of the best buds to select, the best relative time and condition of the stocks or native trees, the favorable seasons, even the congeniality and adaptability of scion to stock, for there is a great difference in the constitutional make-up of different trees, in short, since he possesses the arts of this propagation. Great care, diligence, patience and expense are required to propagate the improved Pecan, but the reward is sure and a handsome compensation awaits faithful work in improved Pecan growing.

## VARIETIES

**FROTSCHER.** Originated in Louisiana, nuts cylindrical, slightly tapering; shell thin, parting easily from the kernel; of delicate flavor and fine quality. Tree thrifty and productive. One of the best.

**HOLLIS.** Originated in Texas. Nuts medium large; oblong-blunt; dull yellowish brown; shell medium; full meat, with fine separation.

**PABST.** Moderately large, cylindrical; soft, thin shell, parting well from the meat; percentage of meat very large, bright color, excellent quality.



**RUSSELL.** Tree very vigorous and productive; nut large, oval, pointed; shell very thin; kernel plump and full, of superior quality.

**STUART.** Introduced by the late W. R. Stuart of Ocean Springs, Mississippi. A standard among high-class Pecans for commercial orchards. Nut large, desirable in shape and of fine appearance, meaty, thin-shelled, well flavored. The Stuart is highly successful in the Southwest.

**SCHLEY.** Large, long, pointed; shell thin; meats plump, full, separating easily, quality best.

**VAN DEMAN.** Large, oblong; shell moderately thin, cracks and separates well; meats plump, full and of good quality.

Other good varieties are James, Texas Prolific, Wolford, San Saba, Money Maker, and others.



A top-worked Pecan tree on our grounds. Above the union of the original stock and scions this tree bears immense crops of extra-fine Stuart nuts, while below the nuts are very small. The relative size of the two nuts is shown by the specimens at the bottom of the picture.

### *Pecan Lore*

**The Pecan nut** is equal in flavor and by many experts considered superior to either English walnuts or almonds.

**As a food product**, the Pecan may yet loosen the grip of the meat trust. It has equally good or better food constituents than meat.

**As a confection product** the Pecan stands high.

**The thin shell and easy separation** of the improved Pecan, and the new shelling machines, are placing the Pecan in the desirable class in this respect.

**The demand** for Pecan nuts is ahead of the supply and growing rapidly. The whole world is looking to the United States for the supply of Pecan nuts. Will we supply them?

**Who plants Pecans** provides for both present and future generations. Orchards are known to be sixty years old in full vigor and bearing. Native trees show evidence of being hundreds of years old.

**Productiveness of the trees.** Four years have given eleven pounds, seven years sixty-five pounds, ten years one hundred pounds, twelve years two hundred pounds, twenty-two years six hundred and thirty pounds, the largest known annual yield fourteen hundred pounds. The original Stuart tree is said by government reports to have produced for its owner in Mississippi, an annual income of \$250.00. It is proper to place the estimate much less than the above for the average orchard and still show a handsome profit in Pecan culture.

**The price of nuts** depends much upon the size and quality. The small nuts wholesale at five to fifteen cents, the improved nuts thirty cents and up.

**The first cost** of a Pecan orchard is light compared with its productive value and its longevity. Twenty-seven trees per acre at \$1.25 to \$1.50 per tree, spaced forty feet apart, for example.

**The worth of the investment** per acre may be placed at five years at \$270.00, ten years \$500.00, fifteen years, \$1,000, and increasing thereafter.

### *Statements of Some Pecan Specialists*

Hon. H. E. Van Deman, Washington, D. C.

"In Louisiana the Pecan reaches its very highest perfection. There are Pecan trees in Louisiana that have been known to bear as much as ten barrels of shelled nuts in one season. I know of two different trees which have done this. There are Pecan trees growing in Louisiana today that are certainly five hundred years old. Orchards here on good land, properly planted and cared for, should live and be productive two hundred to three hundred years. Who plants a Pecan orchard here provides a life insurance with which no company in the United States can compare. I am planting six hundred acres of Pecans and expect to plant five hundred acres more in Louisiana. In the best bottom soils of Louisiana Pecan trees should be planted one hundred feet apart. Lands not so rich, fifty feet apart."

The late C. Falkner, of Waco, first president of the Texas Nut Growers' Association, at the first annual meeting said:

"In Pecan orcharding in Texas, we are in a measure in the dark and feeling our way. Mr. Risien and others have taught us how to top-work native trees. We have made wonderful improvement in Pecan propagation. We have learned how to graft and bud them successfully and we are on the way to greater future discoveries. Many people think the Pecan a hard tree to grow, but if you will take good care of it at first, until it becomes well rooted, it will then take care of itself. No tree resists drouth more than the Pecan. Let every one plant the Pecan."



E. W. Kirkpatrick, McKinney, ex-president of the National Nut Growers' Association:

"Of all the trees grown in Texas, none of them equal the Pecan, even in its wild state. Some native specimens have produced one hundred dollars worth of nuts a season, some trees have produced four hundred and fifty pounds in one year. Pecans are capable of being greatly improved by selection, by grafting and by culture. We have been cutting down trees worth hundreds of dollars, to grow cotton on the land at five to ten cents a pound. The Pecan excels any crop we can plant in Texas."

Prof. Harvey C. Stiles, Raymondville, Texas.

"The Pecan is the tree most perfectly adapted to the conditions in southwest Texas. The regular successive crops from Pecan trees along the Rio Grande is a matter of surprise to Horticulturists, while in many other sections failures are more frequent. The reasons are, absolute immunity from frost during blooming, freedom from rains during blooming, abundant moisture for the roots, which must be supplied either naturally or by irrigation for best results, and the adaptability of the soils here. Native trees near Brownsville are yielding \$25 to \$75 a tree, or over \$500 per acre. It is a significant fact that many nuts of finest quality have sprung from this section."

F. W. Mally, Garrison, Texas.

"We have in East Texas fine bottom lands finely adapted to nut culture. Top-working native Pecans is quite successful. Our success so far, working Pecan on hickory is not so favorable. We are developing a lot of fine varieties of hickory nuts, and having marked success grafting English Walnut on native black walnut. We are also having good success with the Chinquapin."

Gilbert Onderdonk, Nursery, Texas.

"I have found Pecans growing down in Mexico as far as latitude 19 (City of Mexico). In the mountains of that country, I know Pecan groves sixty years old, where conditions are favorable, that is, moisture supplied, and to my certain knowledge they have not missed a crop for eight years. As a rule, the nuts are not so fine as those grown by us in Texas."

Luther Burbank, California. (From Texas Bulletin No. 2.)

"If I were a young man, I would go to Texas, knowing as I do the possibilities of the Pecan industry, and devote my life to propagating new species of the Pecan, as I have done in other lines of horticulture here. Your Pecan is superior to our walnut. Why not develop it? I cannot think of any kind of diversification that will pay the Southern farmer as well as Pecan growing."

Geo. C. Roeding, California.

"Texas is the largest producer of Pecans. They are gathered largely from seedling trees. The business of cracking and shelling the meats is increasing the demand for Pecans at a rapid rate. That Pecans should not be considered successful in California is an error due to want of information. There are really many native trees in the Sacramento and the San Joaquin Valleys. Pecans evidently will prove a valuable addition to our list of nut fruits in the warm interior valleys of California, Oregon and Washington."

Hon. Parker Earle, Roswell, New Mexico.

"There is little or no development of Pecans, walnuts, or other nuts here yet. I see no reason why they should not succeed."

Hon. F. B. Guinn, Rusk, Texas.

"I am having good success top-working native hickories with Pecans. The first trees, top-worked in 1909, are now growing fine."



Young Pecan Orchard

Prof. W. N. Hutt, State Horticulturist, Raleigh, N. C.

"Prospective planters are often shocked by the high price of Pecan trees, which are quoted at 50 cts. to \$2 each as to size. These prices for grafted and budded Pecan trees are only commensurate with the high cost of producing them. The high cost of seed, the slowness of growth when young, the high cost of scions or buds of good quality, the small per cent that make good trees, and the heavy culling necessary: the extra cost of proper digging of the long roots, and the careful handling required, all conspire to make these prices legitimate. Again considering that only seventeen to twenty-seven trees are required per acre and the importance of setting good trees, the price is not excessive."

The Nut Grower, Poulan, Georgia.

"Hickory groves, now of little or no value, can in a few years be converted into orchards more valuable than California orange groves, and become a source of wealth and prosperity to the owner and to the country."

C. L. Edwards, Dallas, Texas.

"The machines recently invented for cracking the nuts and turning out the kernels in halves, have the same meaning to the nut-growers of today that Whitney's cotton gin had to the early cotton-growers."

Prof. John Craig, Cornell University.

"A ten-year-old apple orchard is worth a thousand dollars per acre, and has to be replanted in from twenty to forty years; while a Pecan grove is planted forever and a day. Therefore there is no reason for selling a Pecan grove at less proportionate price than the apple orchard brings."

The Constitution, Atlanta, Georgia.

"Pecans are a valuable asset in this state, and yet they are only in the infancy of their possibilities."

Dallas News Correspondent:

"Some of the finest Pecans in the world are grown in Brown, McCulloch, Mills, Comanche and neighboring counties in Texas. From Lampasas to San Angelo is a stretch of Pecan country that in a good year the section produces as high as 150 cars of nuts. I have looked the situation over carefully and assure you that in a full-crop year, Texas would ship out one thousand carloads of nuts."



The Nut Grower, Poulan, Georgia.

"In 1905 there were imported into the United States nuts of all kinds, 86,000,000 pounds, worth \$6,000,000.00. That year California produced four million pounds of almonds, thirteen million pounds of English walnuts, and the Southern States two and a quarter million pounds of peanuts, and according to best information, four million pounds of Pecans."

Dr. J. F. Wilson, in the Nut Grower.

"I figure cost of planting and cultivating an acre of Pecans for one year as follows:

|                   |         |
|-------------------|---------|
| Land .....        | \$40 00 |
| Trees .....       | 30 00   |
| Planting .....    | 2 50    |
| Fertilizer .....  | 50      |
| Cultivation ..... | 5 00    |
| Management .....  | 12 00   |
| Taxes .....       | 3 00    |
| Insurance .....   | 25      |
| Incidentals ..... | 1 75    |

Cost at end of one year .....\$95 00

E. W. Knox, San Antonio, Texas.

"The Pecan sheller has been a great blessing to the Pecan industry. The small ones are readily cracked and shelled making the better market for the select nuts. When the price of shelled walnuts and almonds is 25 cts. a pound, then preference is given to shelled Pecans at 35 cts. per pound for halves and 30 cts. for pieces. If Pecan halves go above 35 cts. to 40 cts., then the consumers go back to walnuts and almonds."

The Nut Grower states that estimate as to the season's planting of pecans for 1909-10, in Arkansas and Texas, is placed at 200,000 trees. An offer of \$80,000 for an eighty-acre Pecan orchard in Lee county, Georgia, was recently declined.

The Nut Grower, Poulan, Georgia.

"There have been 300,000 cocoanut palms planted in Florida, 20% of which are already bearing. Cocoanuts are highly valuable as a food and as a medicinal product. The peanut crop of the Southern States amounts to near three million pounds."

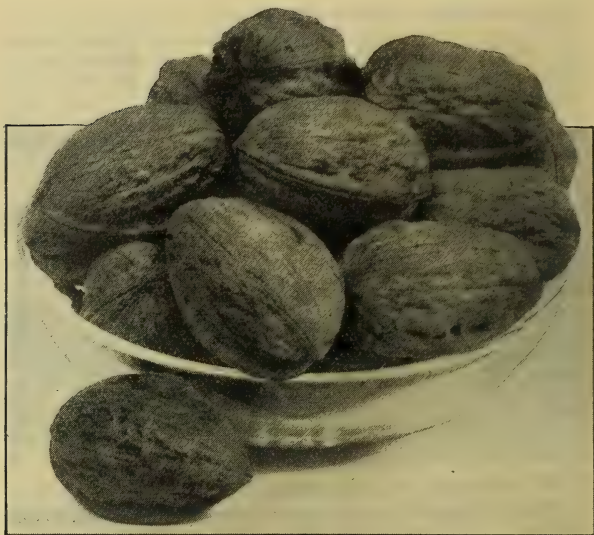
## THE HICKORY NUT (*Hicoria*)

There are ten species of Hickory, native from Canada to Mexico. The Hickories are among the most beautiful and most useful trees of the American forests. In some sections the nuts are gathered in large quantities and placed upon the market for edible purposes. *Hicoria ovata*, the little shellbark Hickory being most popular for eating. Three hundred million feet, board measure, of Hickory lumber, is being manufactured annually. The Pecan so far surpasses all other varieties of this family, especially in the Southern United States, that little attention is paid to the Hickory Nut in this section, except as a stock upon which the improved Pecan is being worked. The Pecan succeeds well, grafted upon the native Hickories. There are very few trees of the Hickory offered for sale in the Southwest.

## WALNUTS

### ENGLISH WALNUTS (*Juglans Regia*)

As before stated, California grows most of the English Walnuts of commerce. Among the nuts grown in California none equal the English Walnut. It is estimated that 16,000,000 pounds are grown annually. Under favorable conditions of soil and climate, the trees attain an immense size, and are enormously productive. They thrive best in



**English Walnut, Franquette**

a deep, rich, loamy soil, with good care and culture. While seedling trees have been used largely for the profitable orchards in California, yet it is known that selected trees grafted on the California Black Walnut are far more desirable as a commercial proposition. There are three reasons for this: first, the grafted trees come into bearing much younger; second, they produce without variation, the fine fruit of the parent tree; third, the hardiness and vigor of the native root stocks are imparted to the improved walnuts, greatly to their advantage. In the southwestern territory, of Southwest Texas, Mexico and New Mexico, where there are more or less arid conditions but where irrigation is largely practiced, the English Walnut succeeds best grafted on the Black Walnut (*Juglans nigra*), and for the moister sections. For more arid conditions, trees should be grafted on the western Texas walnut (*Juglans rupestris*). The elevated fruit plateau of the Southwest, especially the Rio Grande, the Pecos Valleys and tributaries are destined to grow the English Walnut and the Pecan largely, at no distant day. Grafted Walnuts should be used for best results.

**ENGLISH WALNUT SEEDLINGS** from selected soft shell seed, the kind usually planted and which have made California famous.

**FRANQUETTE.** A greatly improved variety, introduced one hundred years ago from the south of France. Large, oblong, full meated, of rich nutty flavor. A prime characteristic is its late starting in the Spring in both seedling and grafted trees.

**PRAEPARTURIEN.** An early and abundant cropper of fine nuts. A late bloomer.

**SANTA BARBARA.** Large, thin shelled, excellent.

**FORD'S IMPROVED.** An abundant cropper of fine uniform nuts.

**WILSON'S WONDER.** From French Bijou. Very large, fine flavor, shell thin, separation perfect. Tree a strong grower, a very young bearer, very prolific and free from disease.

Most of the named sorts can be supplied in both seedling and grafted trees, and we have other named sorts.





Benge Walnut (nut at top is reduced half)

### BLACK WALNUTS (*Juglans nigra*)

No finer tree is grown than our native Black Walnut, both for shade and for nuts, and as a stock on which to graft the English Walnut, also for timber plantings.

**THE BENGE** is a greatly improved Black Walnut. Tree very vigorous. Nuts very large and well flavored. We handle these in grafted trees. For streets and avenues it has no equal. A plantation of these and other Black Walnuts would bring handsome returns within a period of twenty years for the fine lumber they furnish, to say nothing of the nuts. Make a gold-mine out of your waste bottom lands by planting them to Walnuts. Our fine Walnut forests are well nigh exterminated by the hand of the agriculturist and the lumberman and now the exporter to foreign veneer factories is completing the destruction. Moral—plant Walnut timber-belts.

### JAPAN WALNUTS (*Juglans Sieboldiana*)

Fine for shade and prolific as a nut producer. Nuts smaller, but of better quality and better separation than the Black Walnut.

### THE ALMOND (*Prunus amygdalus*)

Originated in ancient Syria, along the Mediterranean, introduced into California, greatly improved, and brought into commercial importance by A. T. Hatch. For successful fertilization in blooming, a number of varieties should be commingled in planting. There are the sweet and the

### THE ALMOND, continued

bitter. The bitter are used for stocks, the sweet are both hard and thin shelled. The paper-shelled varieties are used for commercial nut purposes, the trees being propagated on bitter almond and upon peach seedlings. The former for poor, dry soils, the latter for moister, better soils. Select good peach land for almonds. We grow Lanquedoc, Princess, Sultana and I. X. L. We recommend the Almond commercially only for the elevated plateau of West Texas, New Mexico, Arizona, California and Old Mexico.

## CHESTNUTS (*Castanea*)

**AMERICAN CHESTNUTS** are indigenous and grown for nuts and timber in the middle and eastern states. The success attained in their growth in the Southwest has not been such as to warrant extensive plantings. Sunburn of the trees is a difficulty. Low-heading should be practiced to obviate this. American Sweet are well known native trees of the Eastern States. Numbo, Paragon and Ridgley are improved varieties of these.

**SPANISH or ITALIAN**, introduced from Asia Minor, are valuable here for both ornament and fruit. These stand our hot southern suns better than any chestnut in our experience. The nuts are extensively exported from Italy in large barrels. Size and quality of the nuts are fair.

**JAPANESE MAMMOTH**. A dwarfish, compact tree, producing very large nuts. Not so well adapted here as the Spanish. Better adapted to the more elevated and cooler districts.

## CHINQUAPINS (*Castanea pumilla*)

The large bush variety grows wild in Eastern Texas, Louisiana and Arkansas, and is very little used in cultivation. It succeeds best on barren, poor, sandy soils. The Dwarf Chinquapin (*C. Alnifolia*) grows in the sandy barrens of the South Atlantic States as far west as Louisiana, Arkansas and East Texas. We have never kept these in stock. If wanted we will endeavor to supply them.

## HAZLENUTS, or WITCH HAZEL

*Hamamelis Virginiana*

Native largely from Canada to Florida, west to Nebraska and Texas. Esteemed both for its flowers and its nuts.

## FILBERTS (*Corylus Americana*)

Closely allied to the Hazelnut in its origin, habits and uses. On the Pacific slope these are highly esteemed, there being a number of improved or selected named varieties, viz., Cosford, Coutard, Merveille, and others. Filberts should succeed well in our elevated districts and the valleys of the Southwest.

## PEANUTS (*Arachis hypogoea*)

About three million pounds of peanuts are grown in the Southern States, and form an important food product for man and beast. It is an important agricultural crop. See Bulletin 25, United States Department of Agriculture for valuable information. It can be had for the asking and seed can be had from the seed stores.

## COCOANUT PALM (*Cosmos nucifera*)

Grown upon our immediate coast of Texas and Mexico. It is really a tropical plant, very shy of frosts. These and other palms are grown for ornament largely on and near our coast, both in tubs upon the lawn, and upon the street.

See our Price List of nut trees, sent to all applicants.



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*"THERE is a mysterious tie that  
binds us to a tree that will, on  
through generations yet unborn, and  
always, bless the heir who inherits."*